

Amendments to Claims

Please amend the claims as follows:

1. (Currently Amended) A motion vector and macroblock type determining method, the method comprising:

receiving a high frame-rate video stream having N frames;

skipping a frame N-1;

allocating a motion vector to a macroblock of frame N according to a macroblock type of the skipped frame N-1;

determining a macroblock type of the skipped frame N-1 when the macroblock of the frame N is an intra type;

allocating a macroblock type to a macroblock type of frame N according to a macroblock type of the skipped frame N-1;

wherein allocating the motion vector comprises:

allocating an infinite motion vector to a macroblock of the frame N when the macroblock of the skipped frame N-1 is an intra type;

allocating a motion vector of the macroblock of the frame N when the macroblock of the skipped frame N-1 is a skipped type; and

allocating approximately sum of a motion vector allocated to the macroblock of the frame N and a motion vector allocated to the macroblock of the frame N-1 as a new motion vector for the macroblock of the frame N when the macroblock of the skipped frame N-1 is an inter type; and

outputting a low frame-rate video stream.

2. (Original) The method of claim 1, wherein the macroblock type of the frame N is divided into an inter type and a skipped type.

3. (Original) The method of claim 2, wherein the motion vector of the macroblock of the frame N is determined according to a macroblock type of the skipped frame N-1 when the macroblock of the frame N is an inter type.

4. (Original) The method of claim 2, wherein the macroblock type of the frame N is determined according to a macroblock type of the frame N-1 located at approximately similar position with the macroblock of the frame N when the macroblock of the frame N is a skipped type.

5. (Original) The method of claim 4, further comprising:
determining a new motion vector of the macroblock of the frame N when the new macroblock is an inter type.

6. (Original) The method of claim 5, wherein the new motion vector of the macroblock of the frame N is determined so as to be same with a motion vector of the macroblock of the frame N-1 located at approximately a similar position with the macroblock of the frame N.

7. (Currently Amended) A motion vector and macroblock type determining method, the method comprising:
determining whether a macroblock of a frame N transmitted after a skipped frame N-1 is an inter type or a skipped type;
allocating a new motion vector for the frame N according to a macroblock type of the skipped frame N-1 when a macroblock of the frame N is an intra type; [[and]]
determining a new macroblock type for the frame N according to a macroblock type of the frame N-1 located at approximately a similar position with the macroblock of the frame N when the macroblock of the frame N is a skipped type;
determining a macroblock type of the skipped frame N-1 when the macroblock of the frame N is an intra type;
allocating an infinite motion vector to the macroblock of the frame N when the macroblock of the skipped frame N-1 is an intra type;
allocating the same motion vector of the macroblock of the frame N when the macroblock of the skipped frame N-1 is a skipped type; and

allocating a sum total of a motion vector allocated to macroblock of the frame N and a motion vector allocated to macroblock of the frame N-1 as a new motion vector of the macroblock of the frame N when the macroblock of the skipped frame N-1 is an inter type.

8. (Canceled)

9. (Original) The method of claim 7, further comprising:

determining a macroblock type for the frame N-1 located at approximately a similar position with the macroblock of the frame N when the macroblock of the frame N is a skipped type;

determining the macroblock of the frame N as an intra type when the macroblock of the frame N-1 is an intra type;

determining the macroblock of the frame N as a skipped type when the macroblock of the frame N-1 is a skipped type; and

determining the macroblock of the frame N as an inter type when the macroblock of the frame N-1 is an inter type.

10. (Original) The method of claim 9, further comprising:

allocating a motion vector about the macroblock of the frame N when the macroblock of the frame N is an inter type.

11. (Original) The method of claim 10, wherein the motion vector is allocated so as to be similar to the motion vector of the macroblock of the frame N-1 located at approximately a same position with the macroblock of the frame N.

12. (Currently Amended) A motion vector and macroblock type determining method, the method comprising:

examining a macroblock of a frame N transmitted after a skipped frame N-1 is an inter type;

determining a macroblock type of a frame N-1; [[and]]

allocating a new motion vector for a macroblock of the frame N, according to the macroblock type of the frame N-1,

wherein allocating the new motion vector comprises:

allocating an infinite motion vector to a macroblock of the frame N when the macroblock of the skipped frame N-1 is an intra type;

allocating a motion vector of the macroblock of the frame N when the macroblock of the skipped frame N-1 is a skipped type; and

allocating approximately a sum total of a motion vector allocated to the macroblock of the frame N and a motion vector allocated to the macroblock of the frame N-1 as a new motion vector for the macroblock of the frame N when the macroblock of the skipped frame N-1 is an inter type.

13. (Original) The method of claim 12, wherein the macroblock type of the frame N-1 is divided into an intra type, a skipped type and an inter type.

14. (Original) The method of claim 12, wherein the new motion vector is determined based on an equation $MV'_N = MV_N + MV_{N-1}$, wherein MV'_N is a motion vector allocated to a macroblock of the frame N, MV_N is a motion vector of a macroblock of the frame N, and MV_{N-1} is a motion vector of a macroblock of the frame N-1.

15. (Original) The method of claim 14, wherein MV_{N-1} has an approximately infinite value when the macroblock of the frame N-1 is an intra type.

16. (Original) The method of claim 14, wherein MV_{N-1} has an approximately 0 value when the macroblock of the frame N-1 is a skipped type.

17. (Canceled)

18. (Currently Amended) A motion vector and macroblock type determining method, the method comprising:

examining a macroblock of a frame N transmitted after a skipped frame N-1;

examining a macroblock type of a frame N-1 located at approximately a similar position with the macroblock of the frame N; [[and]]

determining if the macroblock type of the frame N is same as the macroblock type of the frame N-1;

allocating an infinite motion vector to a macroblock of the frame N when the macroblock of the skipped frame N-1 is an intra type;

allocating a motion vector of the macroblock of the frame N when the macroblock of the skipped frame N-1 is a skipped type; and

allocating approximately a sum total of a motion vector allocated to the macroblock of the frame N and a motion vector allocated to the macroblock of the frame N-1 as a new motion vector for the macroblock of the frame N when the macroblock of the skipped frame N-1 is an inter type.

19. (Original) The method of claim 18, wherein the macroblock of the frame N is determined as an intra type, when the macroblock of the frame N-1 is an intra type.

20. (Original) The method of claim 18, wherein the macroblock of the frame N is determined as a skipped type, when the macroblock of the frame N-1 is a skipped type.

21. (Original) The method of claim 18, further comprising:
determining the macroblock of the frame N as an inter type, when the macroblock of the frame N-1 is an inter type; and
allocating a new motion vector of the macroblock of the frame N.

22. (Original) The method of claim 21, wherein a motion vector of the macroblock of the frame N-1 located at approximately same position with the

macroblock of the frame N is allocated as a new motion vector of the macroblock of the frame N.